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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,127	04/08/2005	Douglas Hohlbein	6554-00	2645
23909	7590	09/25/2006	EXAMINER	
COLGATE-PALMOLIVE COMPANY			GUIDOTTI, LAURA COLE	
909 RIVER ROAD			ART UNIT	PAPER NUMBER
PISCATAWAY, NJ 08855			1744	

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/531,127	<b>Applicant(s)</b> HOHLBEIN, DOUGLAS	
	<b>Examiner</b> Laura C. Guidotti	<b>Art Unit</b> 1744	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 April 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>04082005</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Objections*

1. Claims 1-9 are objected to because of the following informalities:

Claim 1 Lines 4-5 state that "...ribs *connecting* the fingers...", however Claim 5 Lines 1-2 recite "...the ribs *interconnecting* the fingers..." It appears that the Applicant used the terms "interconnecting" and "connecting" interchangeable and the Applicant should modify the term "connecting" or "interconnecting" in order to be consistent.

Claims 6 and 7 each use both the terms "connected" and "interconnected" as well.

Claim 3 recites the limitation "the composition" in Line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "the flexible face" in Line 2. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4, 5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hohlbein, US 6,088,870 in view of Halm, US 5,052,071.

Hohlbein discloses the claimed invention including a handle (12), a flexible head secured to the handle (18; Column 3 Lines 15-18), the head mounted to the handle

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(Figures 1-2), the head having an upper face (14) with fingers (16, 26) flexibly mounted thereon (via 20, 22; Column 3 Lines 32-42; Figure 4), and ribs (22) connecting the fingers to the upper face (see Figure 4), whereby flexure of head under compression or expansion causes a lateral movement of the fingers relative to a longitudinal axis of the toothbrush (Figure 4). Regarding claim 4, the fingers (16, 26) are mounted in openings in a flexible face of the head (see Figures 2-6). Regarding claim 5, the ribs interconnecting the fingers and flexible face are formed of polypropylene (Column 4 Lines 25-26). Regarding claim 7, multiple fingers (16, 26) are interconnected by ribs (22) on opposite sides of the fingers (as shown in Figure 3) whereby fingers move in opposite directions when the head is flexed (as shown in Figure 4). Hohlbein does not disclose that the head is flexibly mounted to the handle.

Halm teaches a toothbrush head (10) flexibly mounted to a handle (14) by means of a flexible portion (18) so that when pressure is applied to the head, the head portion will be able to be moved at an angle to the handle, and resiliently will be able to revert to its original position after releasing the pressure (Column 1 Lines 52-58) to prevent the application of too much or insufficient pressure to teeth and gums (Column 1 Lines 11-26).

It would have been obvious for one of ordinary skill in the art to modify the head and handle Hohlbein so that they are flexibly mounted, as Halm teaches, so that when a user is applying pressure to the head during brushing the head will be capable of moving at an angle relative to the handle so that a user is brushing at an optimal angle

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and so that the user does not apply too much or insufficient pressure to gum and tooth surfaces while brushing.

3. Claims 1, 2, 5-6, and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eliav et al., US 2003/0196283 in view of Fischer et al., US 6,092,252.

Eliav et al. disclose the claimed invention including a handle (102), a flexible head secured to the handle (132, 134; paragraph 56), the head mounted to the handle (Figures 2, 9, 18), the head having an upper face (uppermost portion of 134) with fingers (340; the uppermost two "wings" of 340 in Figure 9 or the "flaps" of 340 in Figure 18) flexibly mounted thereon (paragraph 62), and ribs (the lowermost regions of 340 in either Figure 9 or Figure 18) connecting the fingers to the upper face (see Figures 9, 18), whereby flexure of head under compression or expansion causes a lateral movement of the fingers relative to a longitudinal axis of the toothbrush (paragraphs 58-59). Regarding claim 2, at least a portion of the fingers comprise a soft elastomeric material (paragraph 62). Regarding claim 5, the ribs interconnecting the fingers and flexible face are formed from polypropylene (paragraph 68). Regarding claim 6, multiple fingers are interconnected by ribs on one side of the fingers (as the ribs connect the fingers on a side, Figures 9 and 18) whereby all fingers connected by the ribs are capable of moving in one direction when the head is flexed (see Figures 9 and 18). Regarding claim 8, the head contains fingers along at least one edge of the head (Figures 9 and 18) and cleaning elements (152) are at least another portion of the head (Figures 9 and 18). Regarding claim 9, cleaning elements (152) are moved by a

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powered source in the toothbrush (paragraph 55). Eliav et al. does not disclose that the head is flexibly mounted to the handle.

Fischer et al. teach a toothbrush head (4, 5) flexibly mounted to a handle (1; Column 1 Lines 64-67) by means of a flexible portion (24) so that a user can pivot the brush head while brushing teeth in order to achieve an optimal cleaning contact pressure (Column 1 Lines 26-34).

It would have been obvious for one of ordinary skill in the art to modify the head and handle connection of Eliav et al. so that the head is flexibly mounted to the handle, as Fischer et al. teach, so that a user while brushing can flexibly and elastically pivot the brush head in order to achieve an optimal cleaning pressure.

4. Claims 1, 2, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al., US 6,041,467 in view of Halm, US 5,052,071.

Roberts et al. disclose the claimed invention including a handle (12), a flexible head secured to the handle (unlabeled; Column 3 Lines 53-54), the head mounted to the handle (Figures 1-2), the head having an upper face (unlabeled, upper portion of head where bristles 14 are mounted) with fingers (16, 62) flexibly mounted thereon (via 60, 64; Column 5 Lines 31-35; Figure 8A), and ribs (60, 64) connecting the fingers to the upper face (see Figure 8A; Column 5 Lines 31-35), whereby flexure of head under compression or expansion causes a lateral movement of the fingers relative to a longitudinal axis of the toothbrush (Figure 8A; Column 5 Lines 35-40). Regarding claim 2, a portion of the fingers comprise a soft elastomeric material (Column 5 Line 61 to Column 6 Line 5). Regarding claim 4, the fingers (16, 62) are mounted in openings in a

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flexible face of the head (via 64; Column 5 Lines 31-35). Roberts et al. does not disclose that the head is flexibly mounted to the handle.

Halm teaches a toothbrush head (10) flexibly mounted to a handle (14) by means of a flexible portion (18) so that when pressure is applied to the head, the head portion will be able to be moved at an angle to the handle, and resiliently will be able to revert to its original position after releasing the pressure (Column 1 Lines 52-58) to prevent the application of too much or insufficient pressure to teeth and gums (Column 1 Lines 11-26).

It would have been obvious for one of ordinary skill in the art to modify the head and handle Roberts et al. so that they are flexibly mounted, as Halm teaches, so that when a user is applying pressure to the head during brushing the head will be capable of moving at an angle relative to the handle so that a user is brushing at an optimal angle and so that the user does not apply too much or insufficient pressure to gum and tooth surfaces while brushing.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heymann et al., US 2,154,846 in view of Halm, US 5,052,071.

Heymann et al. disclose the claimed invention including a handle (16), a flexible head secured to the handle (unclear, see Page 1 Column 2 Line 13; portion that carries 11, see leftmost portion of Figure 1), the head mounted to the handle (Figure 1), the head having an upper face (unlabeled, uppermost face as extending out of the page in the direction of 10 as shown in Figure 1) with fingers (10) flexibly mounted thereon (see Figures; Page 2 Column 2 Lines 1-6), and ribs (material formed between each of the

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fingers, see portion that includes 12) connecting the fingers to the upper face (see Figures), whereby flexure of head under compression or expansion causes a lateral movement of the fingers relative to a longitudinal axis of the toothbrush (Page 2 Column 2 Lines 1-6). Regarding claim 2, a portion of the fingers comprise a soft elastomeric material (Page 1 Column 2 Line 13). Regarding claim 3, a composition of the rib material is stiffer than the elastomeric material of the fingers (as the rib includes metal cores, Page 1 Column 2 Lines 13-23). Heymann et al. does not disclose that the head is flexibly mounted to the handle.

Halm teaches a toothbrush head (10) flexibly mounted to a handle (14) by means of a flexible portion (18) so that when pressure is applied to the head, the head portion will be able to be moved at an angle to the handle, and resiliently will be able to revert to its original position after releasing the pressure (Column 1 Lines 52-58) to prevent the application of too much or insufficient pressure to teeth and gums (Column 1 Lines 11-26).

It would have been obvious for one of ordinary skill in the art to modify the head and handle Heymann et al. so that they are flexibly mounted, as Halm teaches, so that when a user is applying pressure to the head during brushing the head will be capable of moving at an angle relative to the handle so that a user is brushing at an optimal angle and so that the user does not apply too much or insufficient pressure to gum and tooth surfaces while brushing.

### ***Conclusion***



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6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US D466,303 to Saindon et al. disclose a toothbrush including what appears to be fingers mounted to a head with ribs connecting fingers to the upper face (see Figures). It is not discussed in Saindon et al. whether the fingers are flexibly mounted, if the head is flexibly mounted, or whether flexure of the head under compression or expansion causes a lateral movement of the fingers relative to the axis of the toothbrush.

US 6,599,048 to Kuo, US 5,802,656 to Dawson et al., US 2,206,726 to Lasater, and US 5,735,011 to Asher were all cited in an International Search Report mailed 20 April 2004 and are still considered somewhat relevant as they include structural elements similar to what is required by the present Application. However, after further searching and reconsideration of the claims by the Examiner, other prior art documents (as mentioned above) are more pertinent to the claimed subject matter than those cited in the International Search Report.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C. Guidotti whose telephone number is (571) 272-1272. The examiner can normally be reached on Monday-Thursday, 7:30am - 5pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Laura C Guidotti  
Patent Examiner  
Art Unit 1744

LCG